

The Manitoba Medical Review

Vol. 25

FEBRUARY, 1945

No. 2

Peripheral Vascular Disease

By Richard O. Burrell

M.D., L.M.C.C., Ch. M., F.R.C.S. (Edin.), F.R.C.S. (C)

Peripheral vascular disease is the collective name given to a number of disabling conditions which affect both sexes at all ages. In every case there is a decrease in the vascular supply to the part, the decrease being due to abnormal spasticity, to obliterative structural change, or to both of these factors. Further, the vasospasm may be functional or organic. On this basis then Oschner and De Bakey have classified as follows the various entities that make up peripheral vascular disease:

1. **Vasospastic functional.** Chiefly Raynaud's disease, but also acrocyanosis, erythromelalgia, transient Raynaud's of young women, spasm of ergot and gynergen, Livido reticularis, and the cold extremities of polio.

2. **Vasospastic organic.** Chiefly Buerger's disease, but also Sudeck's atrophy, some cases of phlegmasia alba dolens, major and minor causalgia, arterial embolus and thrombosis, angina pectoris, and some cases of cervical rib and scalenus anticus syndrome.

3. **Degenerative organic.** Arteriosclerosis obliterans and the vascular disease associated with diabetes.

In all of these conditions, except possibly arteriosclerosis obliterans, the prominent factor is vasoconstriction. Let us then consider first the causes, and second, the effects of vasoconstriction.

The Causes

Two are of outstanding significance: cold, and obliteration of an artery or vein. Obliterated vessels are the origin of continuous vasoconstrictive impulses, probably reflex in nature, which affect the collateral vessels of the part. Other causes important in individual cases are: emotion, excess calcium ions, abnormal rubbing of an artery against some rigid object, as in cervical rib and scalenus anticus syndrome, distention of an artery by an embolus, the neuroglioma of regeneration, tobacco, adrenalin, gynergen, and lastly, many cases seem to have a purely functional basis.

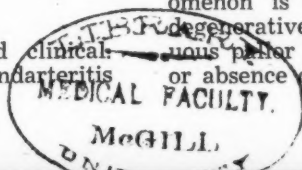
The Effects

These are both structural and clinical. The structural changes include endarteritis

which, as Fontaine and many others have shown, is the inevitable result of vasoconstriction, even in those cases which are in the beginning purely functional. Volkmann's contracture, Sudeck's atrophy and trophic changes in the nails and skin are also found on occasion. The chief clinical effect is pain, neuralgic, causalgic, anginoid or claudicatory, or combinations of these. This would include also the very agonizing rest pain of Buerger's disease.

The classification given above places great emphasis on the element of spasm. It is obvious that vasospasm is of decisive importance because it is the only controllable factor, and furthermore, it leads to eventual endarteritis and obliteration, which like a vicious circle produces further spasm. It exists in varying amounts in all peripheral vascular disease and is found in the collaterals even in the degenerative organic type, although in this instance it is common for these channels to be incapable of relaxation. We often speak glibly of developing a collateral circulation. We can never develop new collateral vessels. We can only relax the spasm in the ones already present. All treatment of peripheral vascular disease is aimed at relaxing spastic vessels because it is the only element amenable to treatment. Because of its variable present and its importance it is necessary for prognostic purposes to determine its extent. The following paragraph sets forth the criteria upon which this determination is made.

The younger the patient the more likely is there to be a large element of spasm. Similarly, females are more prone to have a vasospastic disease, particularly of the functional type. The color changes are almost diagnostic, in that the vasospastic functional types show a color change often triphasic regardless of position but under the stimulus of cold or emotion, while the vasospastic organic types show pallor on elevation and marked rubor on dependency. This phenomenon is extremely diagnostic, and the degenerative organic types show a conspicuous pallor in all positions. The presence or absence of pulsations is of no great help



except that they are always normal in functional vasospastic conditions. Hyperhidrosis invariably indicates a large spastic element, as does excessive response to emotional upsets, exposure to cold, and tobacco. To study spasm objectively we must interrupt the sympathetic control to the part. This can be done in many ways, such as general anaesthesia, spinal anaesthesia, injection of peripheral nerves and the injection of foreign proteins, etc., but by far the best method is the injection with novocaine of the sympathetic ganglia which supply the part. It is an easily mastered and exact technique in that it gives a true picture of the result to be expected from sympathectomy and lends itself to more accurate study of the effect because pain of somatic origin is not abolished and because the patient is able to walk and note the degree of diminution of claudication. The effect is also studied of the exposure of the part to cold, and the increase in surface temperature is gauged by the examiner's hand and a permanent record of this obtained by the use of an oscillogram or thermocouple. The diminution of rest pain can also be gauged.

Treatment

Any improvement in peripheral vascular disease under any form of treatment, medical or otherwise, is due to the relaxation of spasm and the inhibition of vasoconstrictive factors. Accordingly we must attend to each of these lines of therapy to the best of our ability.

We eliminate the vasospastic factors first. All factors which incite fear, worry and anger should be sought and disposed of. Menopausal disturbances should be corrected, and this applies to men as well as women. Coldness must be avoided, both local and generalized. This will often necessitate a change in occupation. The wearing of woollen stockings, mittens and bed socks is essential; woollen underwear must be worn in the winter. The bed clothes must be pre-heated, and tobacco must be unconditionally prohibited.

We then produce active vasodilatation. Heat is the simplest method. It should never be applied to the involved extremities except in the purely functional types. So the home should be kept very warm, and because it is known physiologically that the localized application of heat produces a generalized vasodilatation patients are advised to take hot sitz baths t.i.d. and particularly before

bed while the bed clothes are being pre-heated. The best drug is alcohol, given four times a day. Others are mecholyl and papaverine. The latter is impractical because it must be injected intravenously and frequently to have any active effect. Testosterone and oestrogenic hormones are used when indicated. Depropanex is of no value except that it will often ameliorate intermittent claudication. Buerger's postural exercises may possibly be of some value, and because they can do no harm should be used. The paevex machine and intermittent venous occlusion increase the peripheral circulation only at the time of use, and because they occasionally produce arterial and venous thrombosis should not be used. They do impress the patient. The same effect can be gained by femoral vein resection, but in my experience any improvement is transient. Intravenous hypertonic sodium chloride is still strenuously advocated by Samuels. In my hands it has been valueless. It also impresses the patient. Typhoid vaccine by raising the body temperature does produce a vasodilatation but cannot be used indefinitely and has been known to produce arterial thrombosis. Furthermore, people with Buerger's disease are susceptible to coronary attack and any hyperpyrexial treatment is dangerous for this reason.

It is known that the most active vasodilatation can only be produced surgically, so that when sufficient spastic element exists the sooner surgical attack is made the better it is for the patient. In the purely functional types surgery is rarely indicated. It is not inferred that sympathetic surgery cures Buerger's disease but it most surely delays the evil day of radical amputation and eliminates the vicious circle induced by spasm. The operation is preganglionic sympathectomy for the arm or the leg. The vasodilatation produced by this operation can be greatly heightened by peripheral nerve crushing so that this is often necessary. Peripheral nerve crushing will always relieve the rest pain which is occasionally not relieved by sympathectomy alone, and it must always be preceded by a sympathectomy in order to insure that the incision for exposure will heal. Combined with these two operations we may have to perform minor amputations such as the amputation of toes or a Syme's amputation. It is folly to attempt these minor amputations without sympathectomy and sometimes nerve crushing in addition. Toes that fail to regain normal heat after these operations must be removed.

Other operations in peripheral vascular disease have little application. Repeated novocainization of sympathetic ganglia is excellent treatment for femoro-iliac thrombophlebitis and for arterial embolus, in which case it may be supplemented by embolectomy or resection of the portion of artery involved. Periarterial sympathectomy and femoral vein resection have only a transient effect even when combined.

In the gangrenous and pre-gangrenous phase of peripheral vascular disease it is important to remember that the part must be kept clean and neither heated or chilled. Heat will increase the metabolism and hasten the spread of the gangrene. Chilling will have the same effect by increasing the spasm. The part should be wrapped daily in thick cotton wool while the proper decision as to active treatment is being made. The final treatment is radical supra-condylar amputation, which is common enough in the degenerative organic varieties but should rarely be necessary in the vasospastic organic types even in the 5th decade if these people are given sufficient intelligent attention.

The dangers of sympathectomy in Buerger's disease are greater than in the other forms for two reasons. They are particularly prone to coronary attack and to venous thrombosis with its partner, pulmonary embolus. Therefore the operation should not be done during an acute phase of the disease when the clotting time of the blood is rapid. A nerve crushing operation can be done to tide the patient over. And a muscle splitting incision must be used in abdominal sympathectomy to insure early active movement. The incision devised by Felix Pearl and reported in "Surgery, Gynecology, and Obstet-

rics," July, 1937, is excellent, and the patient can be walking in seven days.

I have said nothing about the diagnosis of peripheral vascular disease. In the vasospastic functional types the diagnosis is usually obvious. In the organic types the symptoms of arterial insufficiency are well known. Claudication and aches and pains in the calf or instep are almost certain signs, as are the presence of color changes on variation in position. Subjective and objective coldness and abnormal sensitivity to cold are common findings. A delayed venous filling time is a constant finding, as are small oscilometric readings in the organic types. Phlebitis migrans usually though not always indicates Buerger's disease. The presence or absence of peripheral pulsations is of small importance in establishing a diagnosis of peripheral vascular disease, although their absence indicates a less cheerful prognosis.

Summary

Peripheral vascular disease is common and is easy to diagnose. The various types are easily distinguished. The functional varieties rarely require surgery but they can be cured by this method. Usually common sense medical advice and treatment will handle them. The vasospastic organic types can invariably be rehabilitated by intelligent medical management combined with preganglionic sympathectomy, nerve crushing and minor amputation. Major amputation is a last resort and rarely necessary. The organic occlusive varieties are carried along by the most effective medical measures and advice, but usually end their stay in bed with a major amputation. They are rarely completely rehabilitated, but due to their advanced age this is seldom necessary.

Fractures of the Lower Third of the Femur

By A. E. Deacon, M.D., M.Sc.O.

Orthopaedic Surgeon, the Children's Hospital and Grace Hospital
Assistant Orthopaedic Surgeon, Winnipeg General Hospital

The fracture clinic at the Winnipeg General Hospital was inaugurated by Dr. A. Gibson in 1939. Since then 911 persons with fractures, dislocations, or epiphyseal separations, have been registered. This does not include all the fractures, dislocations, or epiphyseal separations treated by the fracture service, since some of these patients had multiple fractures; or dislocations or epiphyseal separations accompanied by fractures. It also excludes patients treated on the indoor service but who failed to report to the Saturday morning fracture clinic.

Of the 911 patients who did report to the fracture clinic 872 had fractures, five of which were accompanied by dislocations; 16 had uncomplicated dislocations, and 23 had epiphyseal separations.

Of the 872 patients with fractures, 54 had fractures of the femur, distributed as follows: Neck 11, intertrochanteric 17, shaft 22, and lower end, including the lower third of the shaft, four. The incidence of fracture of the femur in this series was greatest in the upper third, and least in the lower third.

Upper third—28 patients	51.8%
Middle third—22 patients	40.7%
Lower third—4 patients	7.4%

The lower proportion of fractures of the lower third of the femur in this series is in line with reports from other centers. Kellogg Speed at Cook County Hospital in Chicago reported a series of 526 fractures of the femur, of which eight, or 1.5%, were in the lower third. Ashurst, at the Episcopal Hospital in Philadelphia, reported 111 fractures of the femur, of which 11, or 10%, were in the lower third. Cutler, in a review of fractures of the femur over a 20-year period at the Roosevelt Hospital in New York, could find only 38 cases in the lower third. In a similar review over a ten-year period at the Lincoln Hospital in New York, he found only another 38 cases. This low incidence of fractures in the lower third of the femur is found in civilian practice, but not in military practice, where fractures of the lower third exceeded those of the upper third. McLachlin and MacFarlane reported 113 fractures of the femur in the Canadian Army in England. Of these 51 were in the middle third, 42 in the lower third, and only 20 in the upper third.

Clinic	Fractures of the Femur		
	Total Number	Number Lower Third	Per Cent Lower Third
Winnipeg General Hospital	54	4	7.4
Kellogg Speed,			
Cook County Hospital, Chicago ..	526	8	1.5
Ashurst,			
Episcopal Hospital, Philadelphia ..	111	11	10.
Cutler,			
Roosevelt Hospital, New York	20 year period	38	
Cutler,			
Lincoln Hospital, New York	10 year period	38	
McLachlin and MacFarlane,			
Canadian Army in England	113	42	37.

It is fortunate that, in civilian practice at least, the proportion of fractures of the femur decreases from above downwards and is comparatively small in the lower third. It is fortunate because the potential seriousness of fracture of the femur increases from above downwards and is greatest in the lower third. The potential danger is damage to the knee-joint, either at the time of fracture, or later due to malalignment of the fragments. The knee is an almost pure hinge joint and has not the ability of the ball and socket hip joint to adapt itself to new lines of stress and strain. Persistent malalignment of the fragments in the lower third of the femur leads first to a chronic strain of the knee, and later to traumatic arthritis. Fractures involving the joint surfaces of the knee, unless accurately reduced, damage the articu-

lar cartilage and lead to a traumatic arthritis. Imperfectly reduced separated lower femoral epiphyses may lead to malfunction of the knee, but, as these occur in growing bones, and at the site of greatest growth, a slight amount of displacement may correct itself by subsequent growth.

Of the 23 epiphyseal separations which occurred in our 911 patients only three involved the lower end of the femur. Two were recent, the other old and malunited.

One of the recent ones occurred in a 12-year-old girl. She was struck on the antero-medial aspect of the right knee by another child while playing in a country schoolyard. She came to the hospital the next day. X-rays showed a separation of the lateral two-thirds of the lower femoral epiphysis and a longitudinal fracture through the medial side of the metaphysis of the femur. The epiphysis was displaced backwards. Traction by means of a Steinman pin through the upper tibia was applied. At the end of two weeks the backward displacement had been corrected, but there was still some medial displacement. The pin was removed, the fragments manipulated into better position, and a cast from the toes to the groin applied. This was removed in eight weeks. Re-examination five and a half months after the accident showed full extension, and almost full flexion of the knee. X-rays taken at this time showed the fragments firmly united in excellent position.

The other recent epiphyseal separation occurred in a girl of 16. She was struck on the outer side of the right knee by the bumper of a car. When she came to the hospital there was considerable swelling of the knee. Fifty cc.'s of blood was aspirated from the knee-joint and compression bandage applied. X-rays showed a separation of the lateral two-thirds of the lower femoral epiphysis and a longitudinal fracture through the medial side of the metaphysis. The epiphysis was displaced slightly backwards. She was left in bed for two weeks. Then a cast from the toes to the groin was applied. This was removed in seven weeks and she began weight bearing. Examination three and a half months after the accident showed her to be walking well without aid. Re-examination seven and a half months after the accident showed one inch of shortening, slight lateral bowing, and full movement of the knee.

The malunited separated lower femoral epiphysis occurred in a boy of 14. Two months before he appeared at the hospital

he had had his right leg jammed between the bumper of a car and a shed. He had had no medical attention. He came to the hospital because of inability to straighten his knee. Examination of the knee showed full flexion, and extension to 150 degrees. X-rays revealed an old separation of the epiphysis of the lower end of the femur, with the epiphysis displaced backwards and firmly malunited in this position. He was admitted and an anterior wedge osteotomy was performed through the lower end of the upper fragment. The lower fragment was then manipulated into proper position, and a cast from the toes to the groin was applied with the knee straight. The cast was removed in six weeks, at which time X-rays showed the fragments well united in a good position. Examination three months after operation revealed no deformity, full extension of the knee, and flexion of 75 degrees.

These three epiphyseal separations occurred in youths ranging in age from 12 to 16 years, and resulted from a blow on the knee while standing. The two who were struck on the side of the knee had partial separation of the epiphysis accompanied by a fracture of the metaphysis. The other, presumably struck on the front of the knee, had a complete epiphyseal separation without any fracture. In all cases the epiphysis was displaced backwards. After reduction epiphyses usually continue to grow at a normal rate, but in some cases they fuse earlier than normal, resulting in a shortening; or they grow faster on one side than the other, resulting in a deformity.

Of the four fractures of the lower third of the femur only one was of the intercondylar type. This occurred in a man 63 years of age who, three days before coming to the hospital, had been struck on the outer side of the left leg just below the knee by a piece of timber. Examination showed a moderate swelling and limitation of movement of the knee, and marked tenderness over the tibial collateral ligament. X-rays showed a small fracture without displacement in the intercondylar notch of the femur. A cast from the toes to the groin was applied with the knee straight and he was allowed up with crutches. The cast was removed in three weeks, and two weeks later he was bearing weight. Examination three months after the accident showed full extension of the knee, and flexion beyond a right angle.

The three supracondylar fractures which occurred in this series were atypical in that they occurred in pathological limbs with

osteoporotic bones. They were really pathological fractures.

One occurred in a woman of 68. Six months previously she had had an intertrochanteric fracture of the same femur. This was treated by skeletal traction for two months. Then she was sent home on crutches with instructions to refrain from weight-bearing for another month. The fracture healed with about one inch of shortening, but she was able to walk without aid. She stubbed her foot on a carpet in her home and fell to the floor. She came to the hospital the next day. Examination revealed an oblique supracondylar fracture with slight displacement of the fragments. The fragments were manipulated into position and a cast from the toes to the groin was applied. This was changed twice and finally removed ten and a half weeks later. X-rays at that time showed some re-displacement of the fragments which were uniting. She began weight-bearing a month later. When last seen, five months after the accident, she was bearing full weight, but flexion of the knee was limited to 60 degrees.

The second supracondylar fracture occurred in a man of 32. In childhood he had had a septic arthritis of the hip joint on the same side. This had left him with a hip ankylosed in 90 degrees flexion. Eight months previous to his fracture he had had a posterior intertrochanteric wedge osteotomy to bring his leg into extension. This resulted in an arthroplasty with a moderate amount of movement just below the ankylosed hip. Then he fell. He had immediate pain just above the knee but did not report to the hospital until two months later. Examination at that time showed a comminuted, partially united, supracondylar fracture with slight displacement of the fragments. No attempt at reduction or immobilization was made, but he used crutches for another two months, then a cane. When last seen, ten months after his fracture, he was still using a cane, but working full time in a factory in his home town.

The third supracondylar fracture occurred in a man of 55. Five months previously he had been run over by a freight train and his left leg was amputated below the knee. While walking with crutches he slipped and fell on his left knee. Examination showed a comminuted supracondylar fracture of the femur, and a fracture of the patella. Open reduction was performed. The patella was excised. The fragments of the femur were manipulated into a better position and main-

tained with a beefbone peg. A cast from below the stump to the groin was applied with the knee as straight as possible. He is still in hospital.

In a typical supracondylar fracture of the femur the fracture occurs two or three inches above the condyles, and the fracture line usually runs downwards and backwards. The upper end of the lower fragment becomes rotated backwards by the pull of the gastrocnemius, and the whole lower fragment is displaced upwards. To reduce such a fracture three things are necessary: (1) flexion of the knee to relax the gastrocnemius; (2) traction on the lower fragment to pull it down into proper position, and (3) a forward force on the upper end of the lower fragment to correct the backward rotation and bring

the fragments into apposition. Traction can be made by adhesive to the lower leg in a Thomas Splint with a Pearson attachment, or by a Steinman pin through the upper tibia and a Thomas Splint with a Pearson attachment. When a Thomas Splint is used the sling just above the knee is pulled very tight to make a forward thrust on the upper end of the lower fragment. Traction can also be made by a Steinman pin through the upper tibia and the leg on a Braun splint. The knee does not lie at the angle of the splint, but below it, so that the angle of the splint forces the upper end of the lower fragment forwards. A weight of 20 pounds is used for a few days, then reduced to 10 or 15 pounds. The traction is usually united in eight or ten weeks, but weight-bearing is not permitted for three months.

Treatment of Fractures of the Shaft of the Femur

By Dr. E. S. James, F.R.C.S. (Eng.)

Fractures of the shaft of the femur are not common, and so we have no large series of cases to report; but they do occur at all ages and variations in the line of treatment occur according to the age group. An attempt will be made to explain some of these methods of treatment and to point out some of the difficulties encountered and the lessons learned in the last few years while treating them.

Femoral shaft fractures are sometimes encountered at birth and may be a complication of a difficult delivery or the delivery of a breech presentation with extended legs. It has been suggested that the best way to treat these birth fractures is to strap the thighs to the abdomen. This, however, over-corrects the deformity. Traction should be maintained with the pull in the direction in which the proximal fragment is held chiefly by the psoas muscle. This is in a direction at right angles to the body and is attained by suspension of the legs from an overhead frame. Union is usually firm in four weeks.

A similar type of arrangement is used for older children up to the age of five years. Overhead suspension with skin traction maintains the bones in correct alignment. The suspension is arranged so that the buttocks are just raised off the mattress. Both legs are suspended. This is usually called the "Bryant's traction" method. It makes nursing easy and is quite comfortable for these younger children but will not be tolerated by the older ones.

Shortening of the femur due to overlapping of the fragments is a common occurrence in children especially, and is not a point of great significance. Where the fracture is a transverse one, an anaesthetic may be considered to get a perfect reduction under the fluoroscope after suspension is applied. However, there is no need to worry where complete reduction has not occurred as long as the fragments are in correct alignment, which necessarily results where proper suspension is carried out. The fracture brings about an increased blood supply to the part and this stimulates growth at the epiphysis causing an increase in length of the bone which compensates for the shortening. X-rays taken in two or three years will show very little trace of the previous fracture.

Older children or young adults can be conveniently treated on a Thomas's splint. Traction can be carried out with skin or Buck's extension, or by a pin through the femoral condyles or tibial tuberosity. We have found that children do not tolerate skeletal traction well, as they complain of pain about the pin. This may be due to the pin cutting through their softer bone. Small Kirschner wires are more prone to cut through than Steinman pins. We favour skeletal traction through the tibial tubercle rather than through the femoral condyles where the joint capsule may be irritated and a stiff knee joint result. Using a Thomas's splint the traction may be fixed to the splint itself or to weights at the foot of the bed. Counter-traction is produced in either case by rais-

ing the foot of the bed. The nurses state that the care of the patient is easier where weights are used. About 10 to 15 lbs. weight is applied at first and this may be decreased in three or four days. Traction is maintained for six to seven weeks in children, and up to ten to twelve weeks in adults. Union is firm usually when there is no tenderness at the fracture site, but the healing process should be followed by X-rays.

The Thomas's splint can also be used in older people, but here one is liable to get a stiff knee, which takes a long time to mobilize afterwards. This difficulty is overcome by using the "Pearson's attachment" where knee movements can be carried out while continuous traction is being maintained.

The Braun splint has been used for the treatment of these fractures. The femur lies on an inclined plane, and the distal fragment tends to lie in the direction in which the proximal fragment is held. This apparatus can be adjusted and is very comfortable for the patient. It was found, however, that movement occurred at the fracture site each time the patient moved, especially when getting on and off bed pans. For this reason we have ceased to use it.

The Hodgens splint is a modification of the Thomas's splint. The proximal ring is only a semi-circle which lies in front of the groin, and the limb lies on the cloth strips between the parallel longitudinal bars. The traction apparatus is tied to the end of the splint and the splint is suspended by weights so that it moves freely each time the patient moves, yet there is no diminution in the support. This splint has been found very comfortable and requires very little attention during the course of treatment.

A few useful minor points are that the adhesive will stick more firmly, and the skin will be less irritated by it, if first painted with Tincture Benzoin Co. Strips of old woollen blankets are used to extend between the parallel bars and on which the limb rests. The soft wool does not cut into the tissues and is most comfortable. Fracture boards are placed between the springs and mattress. A large weight is needed initially to overcome the muscle pull and correct the shortening. After three or four days the muscles relax and less weight is necessary. One must guard against distraction of the fragments, as this delays union considerably. Secondly, when the muscles relax the entire pull will

come on the ligaments. Ligaments will tolerate a tremendous pull for a short period, but even a small weight acting for a prolonged period causes them to lengthen, and thus interferes with joint stability.

Open operation must be considered in every case and not after all other types of treatment have failed. Everyone fears open operation because of the danger of infection, and it should not be undertaken unless all conditions are favourable. In oblique fractures of the femoral shaft shortening occurs. The sharp ends of the fragments burrow into the surrounding muscles, and as shortening occurs the fracture surfaces are carried further apart.

Occasionally reduction is prevented by intervening muscular tissue and union would be delayed or not occur at all if not corrected. It has been shown that where an open operation is carried out, the stay in hospital may be very much shortened. Where the fracture is oblique, one or two screws placed across the fracture line will suffice to hold the fragments in apposition. In a comminuted or transverse fracture a bone graft or metal bone plate may be applied. It is important to have the graft or bone plate sufficiently long and the screws must pass through both cortices of the femur. Short screws will not maintain the graft or plate in its proper position. After open operation additional protection is necessary and the limb may be encased in plaster or suspended on a splint.

A few words should be said about the ambulant treatment of these fractures, and this brings up the question of "Stader splints." Here two pins are put into the femur above and below the fracture site. These four pins are fixed by a lateral bar. This lateral bar maintains the position of the fragments after reduction has been carried out. Theoretically it allows the patient to be up walking about while the fracture heals. It has been used extensively, but I believe is becoming less popular. Cases where it should be used must be selected carefully. The introduction of infection, lack of complete immobilization, holding apart of the fragments and thus delaying union are some of the objections.

If you care to search the literature for the treatment of femoral shafts you will find many other methods than those listed above. I have not mentioned them, as I have had no personal experience with them. It is my hope that some of our experiences may be helpful to you.

Congestive Heart Failure

By A. L. Shubin, M.D.

The clinical picture of congestive failure is well known to every physician. What is not so well understood is the mechanism by which the symptoms and signs are produced.

Pathological Physiology

There are two theories of congestive failure. In the first or theory of "forward failure", the view is held that the heart is unable to drive the blood through the capillaries into the venules, that is, there is a diminished flow to the tissues. This theory originally proposed by Stokes was later popularized by McKenzie. The second theory, that of "backward failure", is sponsored by Harrison. He maintains that because the heart is unable to empty the veins, there is a diminished flow from the tissues to the heart. Harrison's arguments are based on the following observations: 1, In such conditions as shock and hemorrhage, which are associated with a decreased cardiac output, edema and dyspnea are usually absent. 2, In cases with normal cardiac output, the output does not increase when congestion clears. 3, Therapeutic measures, such as venesection digitalis and diuretics, do not cause an increase in the output of the heart.

There is no definite proof that the failing heart must receive the return flow of blood under an increased pressure. Indeed increased venous pressure is the most important factor in producing the symptoms and signs of congestive heart failure. Though a deficiency in arterial output does occur at times, especially in the very late stages, the "forward failure" theory is no longer tenable. The "backward failure" mechanism then is the true mechanism. It occurs in failure of the left side, the right side and of both sides, of the heart. In "backward failure" there is a gradual accumulation of blood on the venous side with increase in the venous pressure, and this is accompanied by a gradual increase in the blood volume. The heart slowly dilates and soon hypertrophies in order to accommodate the increased amount of inflowing blood resulting from the increased venous pressure. Cardiac enlargement therefore always accompanies failure. The only exceptions to this rule may be acute myocardial weakness such as occurs in coronary occlusion and in adhesive pericardio-mediastinitis. In the latter a shell-like thickening of the pericardium prevents dilation. The hypertrophied heart requires more time

for nourishment and recuperation. Unfortunately, the heart rate is generally increased and the diastolic periods are shortened. This results in fatigue of the heart muscle. Its reserve is diminished and as a machine it becomes inefficient.

In all forms of heart disease when failure occurs there is the same physiological basis—myocardial fatigue. The existence of this fatigue cannot be detected by examining the heart itself. The sounds, rate, rhythm and blood pressure may be normal and murmurs may be absent. It is not in the heart, but in the tissues and the organs of the body that we must look for signs of failure. When failure occurs it is because some precipitating factor supplies the last straw to the overburdened heart. The usual precipitating factors are: 1, Exertion; 2, Infection; 3, Goiter—hyper and hypothyroidism; 4, Pregnancy; 5, Anemia; 6, Tachycardia; 7, Obesity; 8, Arrhythmia; 9, Coronary occlusion.

Treatment

Given a change, the heart may remain compensated for many years. Prevention of failure means avoiding those factors just mentioned. Nothing is to be gained by giving digitalis during the period of compensation.

Rest

Rest is the underlying principle of treatment of many diseases but rest in heart failure does not mean bed rest. Levine states that "there is both clinical and laboratory evidence to show that recumbency may be very harmful for certain patients with heart failure. The heart may be made to work more rather than less, and pulmonary congestion may be made worse rather than better at certain stages of heart failure by placing the patient in bed. Making the bed slant downward by placing 9 inch blocks of wood under the head posts is a simple method of minimizing this undesirable effect. At times it is wise to treat patients with heart disease in a chair rather than in bed." If patient is in bed, ankle movements and exercises of the legs should be done to prevent thrombophlebitis.

Diet

Karell diet (200 cc. of milk four times a day with no other fluids) may be followed by marked diuresis. Semistarvation produces a fall in blood pressure, in pulse rate and in the basal metabolic rate. In a few days a

more liberal diet may be given with the fluid intake restricted to 12-1500 cc., but the patients desire for fluids should be considered and increased accordingly. Sodium not only as salt but as bicarbonate, should be eliminated from the diet.

Sleep

Morphine gr. 1/4 the first night, gr. 1/6 the 2nd night and gr. 1/8 on the 3rd night then chloral hydrate gr xv and potassium bromide gr. xv should be given to ensure sleep. In general sedatives such as barbiturates are of value in relieving the heart of excessive strain from restlessness.

Digitalis

"Digitalis treatment is one of the most important and serious duties of the general physician. It demands a great deal of skill, power of observation, keen interest and experience. A long life is too short to learn enough about this wonderful drug."

—Wenekebach.

Digitalis may be given orally, rectally, hypodermically, intramuscularly or intravenously. The intravenous effect is obtained within 15-30 minutes. Intramuscularly it is effective in 1-2 hours. Fifteen to twenty grains of the powdered leaf can be given by mouth in 1 dose and the patient will be digitalized in a few hours. The disadvantage of such massive doses may be nausea and vomiting for the next 24 hours. It will require about 30 gr. to digitalize the average patient, the weight of the patient is not important, it is the size of the heart that counts. About 1/4 of the total i.e. gr. 1 1/2, 5 times a day, can be given for 2 days. Then gr. 1 1/2 is given 3 times a day until digitalization is complete or toxic effects are produced.

These toxic effects are of two sorts:

1. Subjective; nausea, vomiting, diarrhoea, yellow vision.

Objective; undue slowing of the heart, digitalis-coupling, development of extrasystoles that were not present before, or development of heart block.

The maintenance dose varies; 1 1/2 gr. a day is the average. A patient who has not had digitalis, will be digitalized in about 2 weeks, on a dose of 1 1/2 gr. a day. The body breaks up only about 10% of the intake, the rest is stored in the body, but is completely eliminated from the system in 2-3 weeks.

Patients with well-compensated stenosis who develop paroxysmal auricular fibrillation, can discontinue digitalis when the rhythm

has returned to normal. Digitalis does not increase the blood pressure in hypertension. It has the opposite effect, and if the blood pressure does not fall the patient will not do so well. Fever is not a contraindication if digitalis is otherwise indicated nor is heart block when due to causes other than digitalis.

Diuretics

The xanthine group of drugs such as aminophyllin, theophyllin, etc., are less widely used than formerly. In recent years the mercurial diuretics have proven more effective. Occasionally the addition of a xanthine preparation will delay the reaccumulation of fluid.

The mercurial diuretics, salyrgan, esidrone and mercupurin are usually given intravenously but can also be administered intramuscularly. Rectal suppositories are available and recently tablets are made that can be taken orally. A good method of administration is to give 1/2 cc. intravenously the first day followed by 1-2 cc. at 2 day intervals. The effectiveness of the mercurial diuretics seems to be enhanced by the administration of salts which produce acidosis. Ammonium chloride and ammonium nitrate in enteric coated tablets 6-9 grams. a day are very effective. Some clinicians give 500 mgm. of cevitanic acid per day when the ammonium salts have no effect. In cases with advanced coronary disease it is better to give the mercurial diuretics intramuscularly since numerous deaths were reported following their use intravenously.

Urea 30-45 gm. t.i.d. or potassium chloride 5 gm. per day, can be used in some cases. There is no advantage in purgation.

Phlebotomy

The rapid removal of 500 cc. of blood is of value in right side failure or when there is acute pulmonary edema, in left side heart failure. When the jugular veins stand out in the neck very prominently, or when there is an elevated blood pressure, dramatic relief from venesection may be obtained.

Venotasis or bloodless venesection may prove helpful. Venotasis is obtained by putting tourniquets on three of the limbs allowing arterial pressure to go through but preventing the venous return, 40-50 mm. of pressure is used. One tourniquet is changed every 15 minutes so that no limb is compressed for too long.

Aspiration of the chest is indicated if 500 cc. of fluid can be removed. Abdominal paracentesis is indicated if 200 cc. can be obtained.

Southey's tubes are used rarely now.

Clinical Luncheon Reports

Victoria Hospital

Subdural Hematoma — Dr. Harry Hershfield

Male, age 55, seen at office complaining of severe headache, fatigue, and wobbly walk. He gave a history of having fallen with injury to the head and leg two months previously. He was hospitalized at that time. X-ray examination of the leg was negative, and he was discharged from the hospital three days later as completely cured, with a diagnosis of abrasion of the head and contusion of the leg. On examination he appeared dazed and his speech was slow and hesitating. It took him a long time to answer questions. When walking he would sway to the right side. His blood pressure was 150/90 and he was readmitted to the hospital. The following day he developed hemiplegia on the right side of the body. Lumbar puncture revealed a clear fluid with slightly raised pressure. He died five days after his admission to the hospital. Post-mortem examination revealed a subdural hematoma with edema of the brain. The whole left side of the cerebrum was flattened by a large subdural hematoma which contained a large amount of reddish-brown fluid. There was also a marked terminal pneumonia on the right side and a moderate bronchiectasis.

Dr. Lederman, in discussing the case, emphasized that even trivial head injury may be followed by severe after effects months later. One-third of the cases are bilateral and there may be no localizing symptoms. The blood is not re-absorbed because there is no lymphatic system. Cranial surgery is successful. Another important point to keep in mind is that there is a benign edema following cerebral injury within the first 24-48 hours. Therefore, theoretically, spinal puncture is contra-indicated, since by lowering the pressure, the chance of hemorrhage might be increased. Dr. W. A. Cooper remarked that in cases of strangulation, edema appears 1-2 days later and is responsible for death occurring, in some cases, several days following the injury. Similarly a patient with head injury may die on the third or fourth day following the injury, as a result of edema coming on at that time.

A.L.S.

Winnipeg General Hospital

Duodenal Ulcer in Childhood

Dr. H. D. Kitchen, Dr. Gordon Chown,
John Angus Boyd

Case presented by Mr. John Angus Boyd:

Patient aged 12 with a history of fainting for two weeks, vomiting for one year and dizzy on getting out of bed. During 1944 vomited occasionally; no hematemesis, no abdominal pain. At Christmas, 1944, patient vomited, fainted, became unconscious. A doctor was called who found that the haemoglobin was 38%.

Barium Series showed a deformity of the duodenal cap with a duodenal ulcer. The patient was put on iron and proper diet. Dr. Bird said there was no psychological unbalance. Dr. Elvin said there was some papilloedema. Skull plates were negative. Lumbar puncture was negative with a water pressure of 160. Doubtful ankle clonus. Dr. Harold Rice reporting the electro-encephalogram said the nature of the waves consisted of a lesion deep in the brain near the ventricles. Dr. Oliver Waugh suggested an encephalogram.

Discussion:

Mr. Angus Boyd said that 2% of ulcer patients have a history that reverted to childhood. In chronic gastric upset in a child, duodenal ulcer should be suspected. Occult blood in the stool is very important. Treatment is medical.

Dr. Brian Bird said that tumours around the third ventricle have been demonstrated as a cause of gastric ulcer.

Dr. Harold Rice mentioned the ratio between irritation and gastric ulcer. He still thinks in this case that tumour is likely.

Dr. MacPherson said we occasionally see gastric ulcer in the teen-age group.

Dr. Gordon Chown said in this case the fundi oculi were unusual. He gave a history of a typical case of duodenal ulcer in childhood.

Dr. A. C. Abbott gave an interesting account of ulcer in a boy of 15 years and also one of 12 years.

Dr. Trueman gave a brief report of a tumour of the hypothalamus and gastric ulcer.

Indications for Surgical Intervention in Chronic Ulcerative Colitis

Dr. P. H. T. Thorlakson

Case: Nurse, aged 26, from the spring of 1944 had diarrhoea and cramps. She lost 48 lbs. in 4 months. Ran an irregular temperature from 99 to 102. Stool examinations were repeatedly negative for amoeba. She was on medical treatment for 2 months—low residue, high caloric diet with vitamins, and had a course of Stovarsol, Sulfaguanadine and Carbosol.

Dr. Thorlakson was of the opinion that 70% of these patients would recover under medical treatment, but in the remaining 30% he put forward the suggestion that surgery should be instituted before the large bowel became too greatly affected.

The above mentioned patient in October had an ileostomy 12 inches from the caecum attached to the anterior abdominal wall, then another stab wound in the right iliac through which the appendix was drawn out and sewn to the skin. Through this appendicostomy opening the patient's large bowel is irrigated daily. In some 2 months the patient has gained 18 lbs. in weight and is a great deal better. She is also getting an autogenous vaccine made from stool culture. The patient jocularly calls the two wounds on her abdominal wall "Joe" and "George". Dr. Thorlakson stressed that a sense of humor was a great advantage in treating these patients; over the long period of treatment the patients tended to become discouraged and depressed. This patient will go a year before thought of the ileostomy being closed. At this time a barium enema and sigmoidoscopic examination will be done, and if the bowel looks reasonably healthy the ileostomy will be closed.

Drs. Cadham, Trueman and Walton contributed to the discussion. Dr. Walton stressed if giving sulfaguanadine in such cases that high dosage should be given; he mentioned the figure of 10 grams daily of sulfaguanadine. Dr. Trueman said to be sure to have the colostomy well above any ileitis that might be present.

Recurrent Pancreatitis With Ileus and X-Ray Manifestations

Dr. C. W. Burns, Dr. R. A. MacPherson,
Dr. Colin Ferguson

In considering the symptoms and diagnosis of the less typical upper abdominal disorders

one too often neglects passing judgment on the pancreas. True, the incidence is less frequent than disturbances associated with biliary tract and peptic ulcer disorders, but when symptoms are not typical it is well to remember that pancreatic disease may produce symptoms closely mimicking those of the other digestive organs with which we are more familiar.

In the fulminating cases we do not neglect considering the possibility of acute pancreatitis as opposed to acute peptic perforations. It is, however, in the chronic or subacute conditions that we are more prone to blame the biliary system, the stomach or the duodenum and allow the pancreas to go unsuspected. This is due to two factors, the first that incidence, and the second the lack of clinical facilities to definitely fix the diagnosis on pancreatic lesions.

Today I wish to draw your attention to one helpful manifestation in the diagnosis of chronic or subacute pancreatitis heretofore not recognized, by those of our group at least. Had we been familiar with this feature, a diagnosis of the case I am about to rehearse could have been made in 1942 instead of at post-mortem in 1944.

Before citing the case history we will review a few points in general about the pancreas. Embryologically it is developed as an off-shoot of the primitive digestive tract, so it is not surprising that it may be subject to similar types of disorder nor is it so surprising that it may produce symptoms not unlike other allied organs when attacked by similar degrees of disease. Its anatomical relations are well known to all but it may be worth reminding you that the pancreas is not completely invested by peritoneum; the posterior surface is not invested by peritoneum.

The function of the pancreas is pretty well known. It produces both an internal and an external secretion; the character of this secretion is very irritating to tissues other than those to which it is normally confined. This is evidenced by the typical areas of fat necrosis when pancreatic fluid escapes into the peritoneal cavity. Every surgeon has had the unhappy experience of the digestive properties of pancreatic juices on muscle and skin tissues, particularly in the treatment of intestinal obstruction.

Case History

The case history we are about to discuss is that of a farm laborer who suffered from chronic pancreatitis with subacute exacerbations.

tions of varying degrees from August, 1942, to November, 1944, when he died as a result of ileus and acute dilatation of the stomach caused by subacute pancreatitis.

He received treatment in this hospital on three occasions, over a period of over two years, for upper abdominal complaints, of which pain and vomiting were the chief symptoms. On the first two occasions he was on the medical wards, on the last date of admission he was a patient on the surgical wards during my term of duty. He died without a scar on his abdomen.

His admissions were on the following dates, and on no occasion was he detained more than ten days.

First Admission August 18, 1942

Age 44.

Complaints: (1) Epigastric pain.

(2) Vomiting.

Temperature course: 99.4 — 2 days, then normal temperature and pulse.

Investigation: Complete record of physical examination showed nothing other than the subjective symptoms.

Gastric analysis—within normal limits.

Urinalysis—normal.

Stool examinations—negative.

Wasserman—negative.

Blood picture—not abnormal.

X-ray examination — negative except for "reported duodenal bulb, consistent with findings of duodenal ulcer."

Second Admission October 19, 1942

Same complaints.

Investigation repeated in the same routine manner.

Temperature and pulse charts normal throughout on this occasion.

In the interval, 2 years, he had been fairly free from dyspepsia and abdominal pain.

Third Admission October 22, 1944

Again recorded age is 44.

A very sick looking patient presenting more acute and persistent symptoms on this occasion.

His temperature was 100 on admission and he ran a septic temperature from 100 to 103 until his death November 3, 1944.

Admission complaints:

(1) Pain in epigastrium—3 days.

(2) Vomiting—3 days. He continued to vomit everything he took by mouth.

X-ray plates taken on this patient's last admission to hospital showed the greater curvature of the stomach obliterated, leaving a

straight line, and a large blob of air in the first part of the duodenum.

The authors referred to an article in the S.G. & O. showing almost a duplication of the X-ray plates in this case. There was some discussion as to whether this X-ray picture was pathognomonic of acute pancreatitis.

Those contributing to the discussion were Dr. Trueman, Dr. Hunter and Dr. Thorlakson.

Medical Events for February

Hospital Luncheons

Thur., 1st, 12:30, Winnipeg General Hospital.

Tues., 6th, 12:30, Grace Hospital.

Tues., 6th, 12:30, Misericordia Hospital.

Thur., 8th, 12:30, St. Boniface Hospital.

Thur., 15th, 12:30, Winnipeg General Hospital.

Thur., 22nd, 12:30, St. Boniface Hospital.

Friday, 23rd, Victoria Hospital.

Tues., 27th, 12:30, St. Joseph's Hospital.

Friday, 2nd, Special Meeting addressed by Col. S. S. English and Major Fred Pilcher, 8.15 p.m.

Friday, 16th, 8:15 p.m., Medical College.

Tumour Clinics

Winnipeg General Hospital, every Wednesday at 9:00 a.m.

St. Boniface Hospital, every Friday at 10 a.m.

Winnipeg Medical Society

Friday, 19th, 8:15 p.m., Medical College.

* * *

Venereal Disease Campaign

(V. D. Briefs)

"... Yes it does ..."—Osler

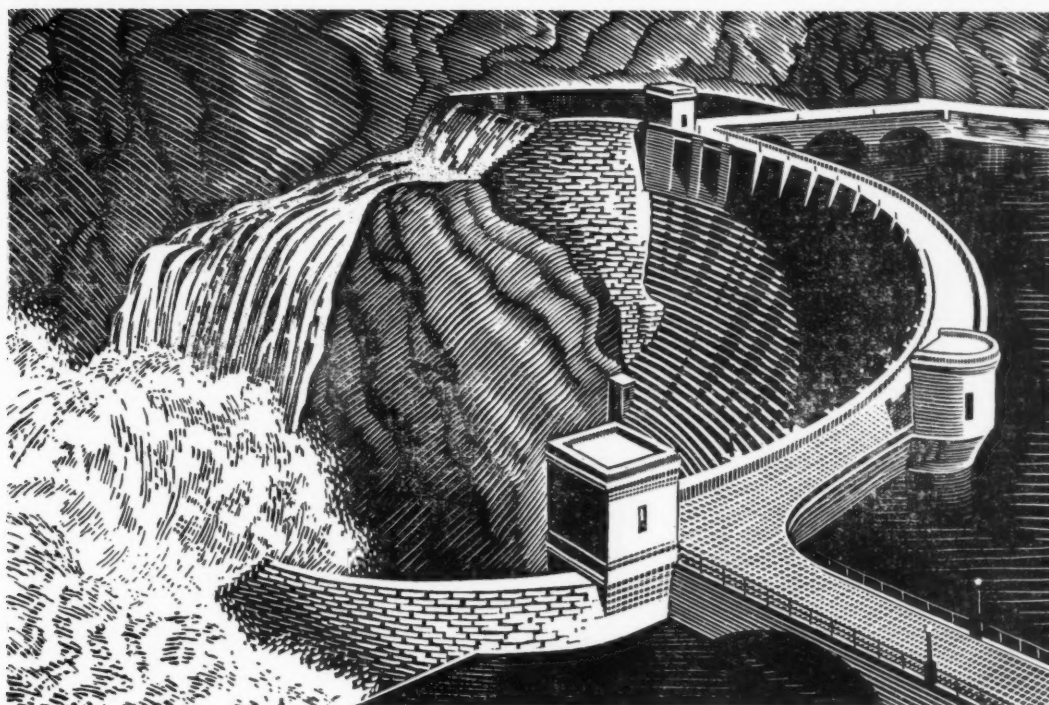
"But I see an incredulous look on some faces and I hear the whispered comment—'tis heard often enough! 'Where is all this syphilis? It does not come my way'. Yes it does. The syphilis we see, but do not recognize, everywhere awaits diagnosis, so protean are its manifestations." Sir William Osler's warning to the Medical Society of London, like any unlearned lesson, bears repeating.

Possible Miscarriage of Justice!

"Syphilis!"—A grim sentence to pass on a patient—the hazards of the disease and its treatment—its repercussions on the family group—personal heartache!! Only the most **convincing evidence** merits a diagnosis of syphilis. **Never** should the diagnosis of syphilis rest on a **single positive blood test!** **FALSE POSITIVE** blood tests do occur!!!

—"Venereal Disease Information," May 1943.

"Find V. D. Contacts—Report V. D. Cases"



"RELIEVE BACK PRESSURE"

When the back-water of the dam gets too high, the sluice-gate is opened and the lake level is dropped to a safe stage.

The arrhythmic heart is prone to produce a potentially dangerous venous congestion. DIGIFOLINE, by slowing down the rate, eliminating weak, ineffectual contractions, which take place before the ventricles have filled, causes a marked increase in the minute volume output of the heart, thus relieving this "back pressure."

DIGIFOLINE * can be administered orally, intravenously, intramuscularly or rectally in congestive failure, auricular fibrillation and certain other myocardial states. One tablet, one c.c. of liquid or one c.c. of ampoule content represents 0.1 Gm. (1½ grains) of digitalis leaf (Focke method).

*Trade Mark Reg'd.

LITERATURE AND SAMPLES ON REQUEST



C I B A *Company Ltd.*

MONTREAL, CANADA

Something Old

About Quacks

The Desire of Life is so natural and strong a Passion, that I have long since ceased to wonder at the great Encouragement which the Practice of Physick finds among us. Well-constituted Governments have always made the Profession of a Physician both honorable and advantageous. Homer's Machaon and Virgil's Iapis were Men of Renown, Heroes in War, and made at least as much Havoc among their Enemies as among their Friends. Those who have little or no Faith in the Abilities of a Quack will apply themselves to him either because he is willing to sell Health at a reasonable Profit, or because the Patient, like a drowning Man, catches at every Twig, and hopes for Relief from the most ignorant, when the most able Physicians give him none. Though Impudence and many Words are as necessary to these Itinerary Galens as a laced Hat or a Merry Andrew, yet they would turn very little to the Advantage of the Owner, if there were not some inward disposition in the sick Man to favour the Pretensions of the Mountebank. Love of Life in the one, and of Money in the other, creates a good Correspondence between them.

There is scarce a City in Great Britain but has one of this Tribe, who takes it into his Protection, and on the Market-Day harangues the good People of the Place with Aphorisms and Receipts. You may depend upon it, he comes not there for his own private interest, but out of a particular affection to the Town. I remember one of these Public-spirited Artists at Hammersmith who told his Audience, "that he had been born and bred there, and that having a special Regard for the Place of his Nativity, he was determined to make a Present of Five Shillings to as many as would accept of it". The whole Crowd stood agape, and ready to take the Doctor at his Word; when putting his Hand into a long Bag, as every one was expecting his Crown-Piece, he drew out an Handful of little Packets, each of which he informed the Spectators was constantly sold at Five Shillings and Six Pence, but that he would bate the odd Five Shillings to every Inhabitant of that Place; The whole Assembly immediately closed with this generous Offer, and took off all his Physick, after the Doctor had made them vouch for one another, that there were no Foreigners among them, but that they were all Hammersmith Men.

—Addison—"Spectator".

(Continued on Page 57)

Something New

Enuresis in Children has been treated with success by the administration in moderate doses of methyl testosterone.

Anginal Pain and cardiac irregularities which always appear at least 2 hours after meals may be due to hypo-glycemia.

The vitamin content of the soy bean equals that of lean meat except for niacin. The richest source of niacin and riboflavin is pig's liver.

Loss of protein and fluid from burned tissues can be reduced by giving nembutal in sedative doses.

In polycythemia vera nearly 80% of cases present neurological symptoms and in 5% the simulation of brain tumor is almost perfect.

Chronic Cor Pulmonale is most commonly due to hypertension with cardiac failure.

The value of "cold vaccines" seems to be negligible. Treated and control groups gave identical results.

Patients with **myxoedema** never develop tolerance to dessicated thyroid.

Cancer cells were found in smears from the external os uteri in 38 of 40 proven cases by Ayre of Montreal.

The injection of 2.5 mg of estradiol benzoate and 12.5 mg of progesterone on two consecutive days resulted in uterine bleeding in 25 out of 31 patients with **secondary amenorrhea** according to Rita Finkler of Newark.

In hypertension an elevated B.M.A. does not necessarily mean hyperthyroidism. G. E. Mountain of Des Moines found in 827 non hyperthyroid patients with systolic pressures of 150 or over, that the B.M.R. varied directly with the blood pressure.

Pleural pains can be relieved by intercostal nerve block with procaine. After injection cough and deep breathing are nearly painless, the likelihood of collapse diminished and cough is more effective.

Powdered posterior pituitary extract has been used successfully by Metz and Lackey in the treatment of **peptic ulcer**. Three quarters of a grain is blown upon the upper nasal mucosa after each meal and at bedtime. They claim benefit in 74% of 418 cases in which this was used as an adjunct to diet.

About Quacks — Continued

Dr. Harris, who was physician-in-ordinary to Charles II, gives an account of one Pontaeus, apparently a contemporary, who is described as the first mountebank who ever appeared on a stage in England. This performer issued a challenge to the physicians of Oxford to prepare the rankest poison they could contrive, and he undertook that one of his servants should take it and recover. Thus would he demonstrate the marvellous virtues of the orvietan he had for sale. The medical practitioners of Oxford accepted the challenge, and decided on aqua fortis. Pontaeus's man drank off on the stage what they brought him, fell down as dead, was carried off, reappeared the next day no worse for his experience. Dr. Harris explained that previous to the test he had well-greased his mouth and gullet with 2 or 3 lbs. of fresh butter, and that after getting him behind the scenes a lot more butter was administered, and then warm water, which made him sick. Another member of the charlatan's staff next washed his hands in molten lead before the spectators. His hands were immediately violently inflamed, and his sufferings were obvious to the crowd, if not appreciated

by himself. Some of the professor's famous green ointment was then applied to the almost skinless flesh, and the hands were carefully bandaged. Next day the bandages were removed, and the hands were scarcely even inflamed. It transpired afterwards that the molten lead was warm quick-silver placed in a ladle painted red, and when the man dipped his hands in the metal he was concealing in them some vermilion, which he rubbed over the flesh under the quicksilver.

The estimation of serum sulphonamide level can be done quickly by using specially prepared paper upon which serum is dropped. The resulting color is compared with a color chart and speedily places the concentration as sub-therapeutic, therapeutic or toxic. The technic is described by W. V. Larose in Proc. Soc. Exper. Bio Med. 53: 98-100. 1943.

A single dose of sulphadiazine (0.15-0.3 gm per kilo) is often sufficient to cure **pneumonia in children** according to David Rosenberg of New York. Prompt response without toxic effects was obtained in 25 children. This mode of treatment is recommended for uncomplicated cases only.



Readily Digestible Milk Modifiers for Infant Feeding

Crown Brand and Lily White Corn Syrups are well known to the medical profession as a thoroughly safe and satisfactory carbohydrate for use as a milk modifier in the bottle feeding of infants.

These pure corn syrups can be readily digested and do not irritate the delicate intestinal tract of the infant.

Either may be used as an adjunct to any milk formulae.

Crown Brand and Lily White Corn Syrups are produced under the most exacting hygienic conditions by the oldest and most experienced refiners of corn syrups in Canada, an assurance of their absolute purity.

"CROWN BRAND" and "LILY WHITE"

CORN SYRUPS

Manufactured by

THE CANADA STARCH COMPANY LIMITED
Montreal and Toronto

For Doctors Only—A convenient pocket calculator, with varied infant feeding formulae employing these two famous corn syrups . . . a scientific infant formula pads, are available on request, also treatise in book form for infant feeding . . . and an interesting booklet on prenatal care. Kindly clip the coupon and this material will be mailed to you immediately.

THE CANADA STARCH CO. Limited
Montreal

Please send me

- ☐ FEEDING CALCULATOR.
- ☐ Book "CORN SYRUP FOR INFANT FEEDING."
- ☐ INFANT FORMULA PADS.
- ☐ Book "THE EXPECTANT MOTHER."
- ☐ Book "DEXTROSOL."

Name

Address

CHECK *the formula*

B-PLEX *Wyeth*

Each two teaspoonfuls (8 c.c.) supply

Thiamine Hydrochloride.....	1000 gamma
Riboflavin.....	2000 gamma
Niacin.....	10000 gamma
Pyridoxine Hydrochloride.....	1000 gamma
Calcium Pantothenate.....	5000 gamma
Choline.....	24000 gamma
Inositol.....	14400 gamma
Biotin Vitamers.....	8 gamma
and	
Unidentified factors as found in rice bran extract.	

Suggested intake:

2 to 4 teaspoonfuls (8 c.c. to 16 c.c.) daily or as indicated.

An aqueous extract of rice bran—one of nature's richest sources of the B-Complex—balanced by the addition of crystalline B factors.

MOST PALATABLE • ECONOMICAL • BALANCED POTENCY

JOHN WYETH & BROTHER (CANADA) LIMITED

Nutritional Division

WALKERVILLE, Ontario

Winnipeg Medical Society—Notice Board

P. H. McNulty, President
A. M. Goodwin, Vice-Pres.

Next Meeting
Friday, February 16th

W. F. Tisdale, Secretary
E. S. James, Treasurer

The Month

February, like January, was an invention of the Roman King Numa Pompilius, who thus created the twelve month calendar. The name is derived from february—to purify—for in this season the ancient Romans performed certain rites of purification and expiation. When Numa worked out his calendar he gave to this last month of the ancient year 29 days, but every fourth year he intercalated a day between the 23rd and 24th. Centuries later when Augustus, following the lead of Julius Caesar, decided to perpetuate his own name in a month he chose Sextilis for this honour and, that it might not be inferior to any other month in the number of its days, he added one to the original 30, taking this one from the already poor February. Thus did it come to pass that February "hath 28 days clear, and 29 in each leap year."

Among the ancients it was practically impossible for any man, woman or child to do anything without the assistance or intervention of some deity and there was a goddess called Februa who presided over the monthly courses of women. February, then, is a good month to have a gynecological meeting. On the programme will be Dr. J. D. McQueen speaking on Cancer of the Cervix, Dr. W. F. Abbott on Habitual Abortion and Dr. Earl Stewart on Trichomonas. With a bit of luck I'll have all the papers in print for the benefit of those who couldn't attend.

Dr. Richard Mead

February 16th, the date of our meeting, is the anniversary of the death in 1754 of Richard Mead, one of the most prominent 18th century physicians. Mead was a native of Stepney and a graduate of Padua. He was fortunate in securing the interest of John Radcliffe and was thereby introduced to London society. "I love you Mead" said Radcliffe to him, "and I'll tell you a sure secret to make your fortune—use all mankind ill." Radcliffe, who based this advice on his own success, was rough, rude and arrogant. Mead, on the contrary, was scholarly and a courtier. His disposition was so pleasant that Dr. Samuel Johnson said of him "Dr. Mead lived more in the broad sunshine of life than almost any man." Mead was consulted at the death-bed of Queen Anne, and later was physician to

George II. He was an ardent experimentalist, the result, doubtless, of his Padua training, and did much to advance the cause of inoculation for the prevention of smallpox. In 1721 he inoculated a number of condemned criminals placed at his disposal by the Prince of Wales who wished to be assured of the safety of the procedure before submitting to it his own family. The experiment was successful, the prisoners were pardoned and Mead had the satisfaction of seeing this salutary new procedure adopted in high places.

In 1720, during one of its periodical devastations, the Black Death fell with terrific violence upon Marseilles, where it slew 40,000 of the 90,000 inhabitants. Later it spread to Aix and Toulon and other towns in Provence where the death-toll rose to 120,000. It was felt that no mortal agency could be responsible for so terrible and tremendous a disaster. Many believed that it was an evidence of divine displeasure that couldn't be stayed. Mead, nevertheless, defended his argument that it was a contagious disease that could be prevented and he persuaded the authorities to establish a quarantine. At the same time he urged the establishment of a Medical Police similar to the modern Board of Health. He did much to make the lot of sailors more tolerable by urging adoption of a ventilating system on board ships both merchant and naval.

When Radcliffe died in 1729, Mead, then 56, moved into his house in Bloomsbury Square and carried the gold-headed cane so famous in medical history. His practice was large and lucrative. He had an income of between six and seven thousand pounds and that at a time when the purchasing power of money was seven or eight times what it is now. That is to say that his revenue in terms of today would be no less than \$230,000.

In addition to attending titled and wealthy patients at their homes or his, he sat daily in two of the popular coffee houses—Batson's in Cornhill and Tom's in Russell Street—where he saw apothecaries or read their descriptions of complaints. The apothecaries paid a fee of half a guinea for his advice which he gave without seeing the cases. It was as if a "big shot" from the Medical Arts Building were to sip coffee at the "Green Apple Pie" while handing out advice to the

chiropractors at \$20.00 per advice. The clergy and men of learning he advised free and his charity was great. We have, however, no such letters in his hand as we have of his contemporary Garth who referred a poor patient to Sir Hans Sloan with this note "Dear Sir Hans: If you can recommend this miserable slut to be fluxed, you'll do an act of charity for, Your obedient servant, S. Garth."

There being no income Tax in those days Mead had to find other ways to get rid of his wealth. He kept an open house for men of genius and any one with any claim on culture could count upon Mead's hospitality. He maintained large city and country establishments between which he was accustomed to drive in his coach-and-six. He was an ardent collector of the rare, the curious and the precious, to such a degree indeed that he built a museum to house his great collections of paintings, statuary, coins, medals, books and the like. One of Mead's decisions was of great political importance. He was called in consultation to the bedside of Queen Anne and stated positively that she could not live over an hour. The Whigs were roused to take immediate steps to secure the Hanoverian succession and while the Queen lived for a longer time, the return of the Stuarts was prevented. No wonder he prospered under the Georges.

The January meeting went off well. Dr. Margolese set out to show that hyperthyroidism could be treated medically as well as surgically. Medical treatment, however, demands a careful study of each case for, while under proper treatment good results will be obtained, there can be no proper treatment until the cause of the condition has been determined. Dr. Kitchen stressed the importance of recognizing masked forms of hypothyroidism. Dr. Walton spoke upon "Epidemic Jaundice," a disorder more prevalent in the theatres of war than at home but which is already showing itself here and which is not unlikely to become more prominent in the future. As Dr. Walton spoke many of his audience, I am sure, found their thoughts in England and by the bedside of Art. Hay whose death from the disease set a tragic emphasis upon the presentation. These three papers will, in due course be published in the Review.

A special meeting at which the Hon Ivan Schultz will elaborate upon the new Health

Plan is slated for the 25th of January and will be reported in the next issue of the Review.

On the 2nd of February there will be another special meeting which will be addressed by Colonel S. S. English and Major Fred Pilcher.

Colonel English will speak on Remedial Physical Therapy in Active Treatment Hospitals and Reconditioning Centres in Canada.

Major Pilcher will speak on the Management of Urethritis in Male Patients. J.C.H.

9th Canadian General Hospital,
Canadian Army Overseas,
25th November, 1944.

Winnipeg Medical Society,

Dear Friends:

Thank you very much indeed for the very fine parcel received today. It is just what I need and is very well selected. I am back in England now so the parcel had been to Holland and back before I got it and was in very good condition.

I came back here a month ago after proceeding by stages—some short and some very long—across France, Belgium and part of Holland and while I hated leaving my unit, it certainly is very pleasant to be back in the comfort of a base hospital again. However, in spite of the various vicissitudes it was a grand experience over there even though I did have the hell scared out of me a few times!

Sam McFetridge is here with me now and is a very important member of the surgical side. It's a pleasure to have him. Nat. Blair, also a Man. grad., has just left and is now with Ross Cooper at Colchester. Bill Dunlop is Registrar and Houston was here until recently but has now gone overseas—so there is quite a good Manitoba representation here. They are all anxious to get overseas and I expect will in due course.

I saw Earl Stephenson a short time ago. He is at Bramshott as well as Art Hay.

Thank you again very much for the grand parcel and I wish you all a Very Happy Christmas.

Sincerely,

Ed. Holland.

ANALGESIC SPASMOLYTIC SEDATIVE

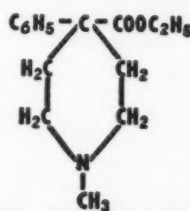
For Oral and Intramuscular Administration

THE analgesic effect appears to be between that of morphine and codeine, and it persists for from three to six hours.

Demerol has many indications in medicine, surgery and obstetrics.

Before prescribing, physicians should read carefully the booklet on Demerol hydrochloride (sent free on request). Prescriptions are subject to Canadian narcotic regulations.

Supplied for oral use, tablets of 50 mg.; for injection, ampuls of 2 cc. (100 mg.).



ethyl 1-methyl-4-phenyl-
piperidine-4-carboxyl-
ate hydrochloride

Demerol hydrochloride



Demerol

Trademark Reg. U. S. Pat. Off. & Canada

HYDROCHLORIDE

Brand of MEPERIDINE HYDROCHLORIDE
(Isonipecaïne)

Winthrop Chemical Company, Inc.

Pharmaceuticals of merit for the physician • NEW YORK 13, N. Y. • WINDSOR, ONT.

COMBAT NUTRITIVE FAILURE

This Modern Way



● Since reliance on diet alone is uncertain and slow, polyvitamin therapy is often indicated.

Such therapy should be based on multiples of the new nutritional yardstick—the daily Recommended Dietary Allowances of the Food and Nutrition Board of the National Research Council. This formula represents the combined judgment of “more than 50 persons qualified to express an opinion on the subject.”*

One capsule daily of Squibb Special Vitamin Formula supplies the Recommended Dietary Allowances for a 70 Kg. man.

Squibb Special Vitamin Formula capsules are supplied to druggists in bulk. Generally dispensed on prescription for 7 or 8 cents per capsule, in any quantity designated.

Combat nutritive failure this modern way, by using Squibb Special Vitamin Formula Capsules.

- For Therapy
- Diet Supplement in Health
- Diet Supplement in Convalescence

*National Research Council, Reprint and Circular Series No. 115, Jan. 1943.

For literature write
E. R. Squibb & Sons of Canada, Ltd.
36-48 Caledonia Rd., Toronto, Ont.

Each capsule contains:

5000 Units Vitamin A
800 Units Vitamin D
2 Mg. Thiamine Hydrochloride
3 Mg. Riboflavin
20 Mg. Niacinamide
75 Mg. Ascorbic Acid

E. R. SQUIBB & SONS OF CANADA, Ltd.

MANUFACTURING CHEMISTS TO THE
MEDICAL PROFESSION SINCE 1858

A New Years Message to The Manitoba Division

By Harris McPhedran, M.D.

President, Canadian Medical Association

At the beginning of the New Year, most of us meditate on the past and try to look into the future. There has never been a time in the long history of medicine when it has seemed so necessary to do this, as there is so much unrest within and without our profession. This unrest inclines some to uproot entirely the present system of practice. We would do well to determine whether the "way of life" envisaged for our profession by some of our members and by others not of our company is in the best interests of the people and also conforms to our time-honoured Code of Ethics and the Physicians' Oath.

We must consider whether any scheme or plan promulgated for improvement of health services preserves for each individual citizen that liberty and freedom which is his lawful heritage.

If these conditions are not fulfilled, we must be prepared to do battle with those who sponsor them. It must be made clear, also, to the public and to the Governments who speak for them that health depends on environmental conditions under which they (the people) live and work, upon security against want and fear, upon adequate nutrition, upon educational facilities, upon opportunities for exercise and leisure. Failure to conserve the ethical standards of our profession, the rights of the individual and better living conditions for all will seriously jeopardize, if not entirely prevent, the fulfilment of any plan for improved health services.

Herein lies an opportunity for all professions concerned in giving services and especially all members of the medical profession to inform themselves of the conditions that are fundamental for improving the health of the public. Having done this they will then be in a position and should avail themselves of the opportunity, to guide and direct the thinking of the citizens of this country without whose cooperation no scheme or plan for the betterment of health can succeed.

This is my message to the Manitoba Division and all other Divisions, a message full of hope and promise, of better things to come if each division, each Society, each practitioner will join whole-heartedly in the necessary but arduous task of education.

Editorial

The recent announcement by the Minister of Health for the Province was one of great importance and one that was bound to meet with universal approval. From the shoulders of the sick is to be lifted half of the burden of ill health. Inadequate means will no longer prevent adequate treatment. The doors of the laboratories and x-ray departments are to be flung open to the immense advantage of both doctor and patient. Scientific practice is no longer to be a thing wished for and despaired of by the rural practitioners. At last we all can give and all patients will receive the advantages of modern medicine.

There will be from the laymen only praise and such criticism as the profession will offer will be altogether constructive. There are, however, certain matters which must be carefully settled before the scheme is applied. First of these is the question of where the diagnostic services are to be obtained and by whom they are to be rendered. In the rural districts this is no problem but one can foresee difficulties in the cities. The availability of diagnostic facilities means that all manner of tests and examinations will be done in greatly increased numbers. To insure this increase is, after all, the purpose of the plan. But if the work is to be done exclusively in the hospitals, and if these services are to be given freely to in-patients, one can see that the in-patient volume alone will be so great that it will keep busy even larger staffs than are now employed. Out-patients would then most likely be seen by appointment made perhaps for days or even weeks in advance. Such a system would not work. It would be much better to arrange that payment be made to doctors who have and use laboratory and x-ray facilities. Unless this is done those individuals and groups who have such facilities would find their equipment a costly expense for who would pay them for what elsewhere could be got for nothing and to which they were by law entitled? A second and most important matter is the question of salaries. Not the gross but the net income is the important one. Those with knowledge of such things set the approximate cost of doing work at 40% of the income. That means a salary of \$6,000 is actually one of \$3,600, not very large for a busy practitioner. The inducements to practice in the country should include the regular increase in income that

is worked for and anticipated by one in private practice. Not holidays alone but opportunities to obtain post graduate instruction should be assured. Again the present method of bargaining between doctor and municipality might well be abandoned in favor of collective bargaining, or, if that is too grating a term, to a method whereby a committee of the Association would look after the interests of the doctor. Indeed all contracts between doctors and laymen, whether they be institutions, industries, governments or societies, should be studied by the Association and approved only when they are obviously fair and just.

One other question arises and that is—what about special services? Apparently these remain an expense for the patient but this outlay would be easier borne. There is, however, the question of where the next generation of specialists is to come from. Can one on an income of \$300.00 per month support and protect a family, care for his future, educate his children and hope to spend the time and money necessary to train himself for the work he prefers and to which he would limit himself?

These are some of the matters that require consideration. J.C.H.

Obituary

Lieut.-Col. Arthur Wesley Stanley Hay

Lieut.-Col. Arthur Wesley Stanley Hay, R.C.A.M.C., died in England December 31, 1944, of acute hepatitis, after a few days' illness.

Born in Smith Falls, Ont., in 1902, he was educated at Swift Current, Sask. After four years' service in a bank, he entered Manitoba Medical College, graduating in 1928 with the gold medal for the highest standing in the course and the gold medal in surgery. He entered the Maclean-Thorlakson clinic, and two years later went overseas for post-graduate study. After obtaining the F.R.C.S. Edinburgh degree he returned to Winnipeg in 1931 and resumed his connection with the clinic.

In the next ten years he became a member of the honorary attending staff in surgery of the Winnipeg General and Children's Hospitals and lecturer in surgery in the Univer-

Book Review

The seventeenth anniversary edition of Harofve Haivri has reached our desk. This the leading Hebrew medical journal and should be of great interest to our Jewish colleagues. There are articles in English on Cesarean Section, Stricture of the Rectum and Cancer of the Skin. There is also a series of short biographical sketches of the nine Jewish doctors who were awarded the Nobel Prize between 1908 and 1936. This and preceding numbers can be obtained at the Medical Library.

American College of Surgeons Defers War Sessions

The American College of Surgeons, in order to help the war effort, has deferred for the time being its 1945 series of War Sessions, four of which were to be held in February, according to an announcement by Dr. Irvin Abell, Chairman of the Board of Regents. The February meetings were to be held in St. Louis on the 2nd, in Louisville on the 5th, in Milwaukee on the 7th and in Cleveland on the 27th.

sity of Manitoba. He was also a Fellow of the Royal College of Surgeons of Canada, and published several articles in medical journals, both alone and in collaboration with Dr. P. H. T. Thorlakson. His paper on Surgery of the Aged gained much favorable notice.

In 1941 Dr. Hay enlisted in the R.C.A.M.C. and was soon sent to Petawawa in charge of surgery. He went overseas in July, 1943, and became chief of surgery in No. 22 Canadian General Hospital. He is survived by his wife and three young children—two sons and a daughter.

"Art" Hay was a general favorite because of his friendliness, fine character and keen joy of living. Already he had made his mark as a man, and but for his untimely death would have won national reputation as a surgeon. We can ill spare such men, and Manitoba is the poorer for his passing.

"VERMILET"

TABLETS

(Enteric coated tablets
of Gentian Violet "Trosst")

Drawing of Enterobius
Vermicularis approxi-
mately six times actual
size.

FOR THE TREATMENT OF PINWORM INFESTATION

Infestation with pinworm is common in children and not unknown in adults. The high incidence of infestation revealed in recent surveys makes this condition a major public health problem. Symptoms may be entirely absent. Diagnosis is best established by using The National Institute of Health technique of stroking the skin anal margin with a cellophane swab in the morning before bathing and examining the swab for ova of the parasite.

Fortunately, 90% of cases can be cured within a short time with little inconvenience. Clinical records show that the most effective treatment is the administration of gentian violet, in the form of tablets, VERMILET "Trosst". These tablets are specially made to pass undissolved through the stomach and to dissolve in the lower part of the ileum.

NOTE:—Gentian violet is contra-indicated in heart disease, hepatic and renal disease, gastro-enteritis, pregnancy, and in the presence of febrile or debilitating diseases.

DOSAGE

CHILDREN:—Over 3 years of age, 3/20 gr. (9.6 mg.) for each apparent year of age, divided in three parts and taken before meals. From 10 to 16 years of age, one tablet of 1/4 gr. (32 mg.) three times daily before meals.

ADULTS:—Two tablets of 1/4 gr. (32 mg.) three times daily before meals.

Repeat dose daily for 8 days, rest for one week, then repeat dose for additional 8 days. No patient should be discharged as cured unless 3 or 4 swabs, examined at intervals of a week apart, show absence of ova.

MODES OF ISSUE

E.C.T. No. 409 "Trosst"

3/20 gr. (9.6 mg.)

E.C.T. No. 410 "Trosst"

1/2 gr. (32 mg.)

A package of swabs and literature describing technique for demonstrating the ova will be sent free upon request.



Charles E. Trosst & Co.
MONTREAL CANADA

The Canadian Mark of Quality
Pharmaceuticals Since 1899

WHERE QUALITY AND PRICE ARE EQUAL OR BETTER, PRESCRIBE CANADIAN PRODUCTS



The Charge of the Light *Lunch* Brigade

The noontime rush for a sandwich and a cup of coffee is a common sight. Coupled with scanty, hastily-eaten breakfasts, such inadequate meals frequently lead to subcritical vitamin deficiencies with their train of minor ills. Nor are persons who eat too rapidly and too little alone in forming the picture of nutritional deficiencies which physicians see so often. For in addition there are the indefatigable dabblers in "beauty" and reducing diets, food faddists, notional and finicky eaters, patients recovering from illness or surgical procedures, alcoholics, certain dyspeptic patients, and those cases in which there is a loss of foods through diarrhoea and vomiting as in pregnancy.

In the prophylaxis and treatment of such cases, many physicians, in addition to suggesting a corrective diet, are prescribing a highly potent multiple vitamin supplement such as Dayamin Capsules. These small, easily-taken capsules contain the optimum daily requirements of vitamins insofar as these are known at the present time. Dayamin Capsules are rigidly standardized and subject to the exacting control exercised over all Abbott pharmaceutical pre-

parations. They are available through pharmacies in boxes of 30 and bottles of 100 capsules.

★ ★ ★

EACH CAPSULE CONTAINS

THIAMINE HYDROCHLORIDE (B ₁)	3 mg.
RIBOFLAVIN [B ₂ (G)]	3 mg.
NICOTINAMIDE	20 mg.
PRYDOXINE HYDROCHLORIDE (B ₆)	1 mg.
PANTOTHENIC ACID	3 mg.
ASCORBIC ACID (C)	75 mg.
VITAMIN A	5,000 Int'l units
VITAMIN D	800 Int'l units

Dayamin

(ABBOTT'S MULTIPLE VITAMINS)

ABBOTT LABORATORIES LIMITED • 20 BATES ROAD, MONTREAL, 8

Personal Notes and Social News

Captain G. A. Waugh, R.C.A.M.C. (Overseas) and Mrs. Waugh are happy to announce the birth of a daughter (Mona Katharine) on January 5th, 1945 at the Winnipeg General Hospital.

Captain Richard Yaholnitsky, R.C.A.M.C., son of Mr. and Mrs. Peter Yaholnitsky of Yorkton, Sask., was married to Helen Grace Ann, youngest daughter of Mr. and Mrs. Duncan Dewar of Winnipeg on January 5th. Dr. and Mrs. Yaholnitsky will reside in Winnipeg.

Dr. Dallas Medd, R.C.A.M.C., son of Dr. and Mrs. A. E. Medd of Winnipegosis, Man., is engaged to marry May, oldest daughter of Mr. and Mrs. Eric A. Isfeld of Winnipeg. The wedding to take place on February 9th in Winnipeg.

The Executive and Members of this Association wish to express their deepest sympathy to the parents of the late Captain John A. McFadden, R.C.A.M.C., who died of wounds received while on active duty in Italy.

Major Robert J. Hitesman, after four and a half years service in the R.C.A.M.C. has resumed civilian practice at 512 Medical Arts Building.

Captain Hugh Allen, R.C.A.M.C. (in Italy) has been recently promoted to the rank of Major.

Dr. H. M. Speechly was re-elected chairman of the advisory traffic commission for 1945.

The following Manitoba doctors have been accepted into the fellowship of the American College of Surgeons in 1944: Drs. Wilfred S. Peters, Brandon; Wilfred D. Smith, Winnipeg; Paul H. T. Thorlakson, Winnipeg.

Dr. Walter Alexander, formerly Squadron Leader in the R.C.A.F., has now entered civilian practice as an associate of Dr. E. H. Alexander.

Surgeon Lieut.-Commander G. P. Fahrni, D.S.C., has been promoted to the rank of Surgeon Commander.

Captain Rene Letienne, R.C.A.M.C. (overseas) has been promoted to the rank of acting major.

Dr. John A. McNeill formerly of Winnipeg, is now practicing at Gretna, Man.

Dr. Arthur Murray Clare, formerly of Langenburg, Sask., is now practicing at Neepawa, Manitoba.

Dr. Orville K. Hjertaas formerly of Winnipeg is now practicing at Wauchope, Sask.

Dr. Clive Neilson, R.C.A.M.C., after four and a half years service in Canada and Overseas, has resumed general practice at 404 Medical Arts Building.

Captain Samuel Easton formerly in the R.C.A.M.C. in Canada and Overseas has resumed civilian practice at 214 Curry Building, Winnipeg.

Dr. James W. Simpson, formerly of Gretna, Man., is now located at 210 Kingston Row, Winnipeg.

Dr. and Mrs. R. L. Howden are celebrating the birth of a son (Richard Lorimer), on January 25th, 1945, at the St. Boniface hospital.

Dr. Roy Martin's Neepawa Rink won the premier honors in Portage la Prairie's 54th Annual Bonspiel.



Model 659

"FISHERMADE"

**HEALTH BELT
for Ptoais
and
good General
Support**

Constructed of
white mesh
material with
elastic inserts at
bottom of side
sections over
hips, eliminating
cutting through
the groin. Fast-
ens up centre
front.

**Physicians
Prescribe as
'FISHERMADE'
Model 659**

Made in Canada by

FISHER & BURPE, LTD.

219 KENNEDY STREET WINNIPEG

Branches: EDMONTON and VANCOUVER

At the Menopause

"SORROW"
A study by Aristide Maillol; reproduced from the Hyperion Press art book "Maillol".



All patients, however severe or mild their symptoms, can be treated effectively with these orally-active natural oestrogens. "Premarin" (No. 866) for the most severe symptoms; the new *Half-Strength* "Premarin" (No. 867) when symptoms are moderately severe; "Emmenin" for mild symptoms and maintenance.

"PREMARIN" and "EMMENIN"

conjugated oestrogens (equine)
Tablets No. 866; Tablets No. 867

conjugated oestrogens (placental)
Tablets No. 701; Liquid No. 927

NATURALLY OCCURRING • WATER SOLUBLE • WELL TOLERATED
ESSENTIALLY SAFE • IMPART A FEELING OF WELL-BEING

Now Available! "PREMARIN"
Half-Strength
(No. 867)

A new potency for those patients whose symptoms, though severe, do not require the intensive therapy provided by "Premarin" full strength.
Bottles of 20 and 100 tablets.

AYERST, McKENNA & HARRISON LIMITED
MONTREAL Biological and Pharmaceutical Chemists CANADA



302

Department of Health and Public Welfare
Comparisons Communicable Diseases — Manitoba (Whites Only)

DISEASES	1944		1943		TOTALS	
	Dec. 3 to Dec. 31	Nov. 5 to Dec. 2	Dec. 5 to Dec. 31	Nov. 7 to Dec. 4	Jan. 1 to Dec. 31, '44	Jan. 1 to Dec. 31, '43
Anterior Poliomyelitis	—	5	—	3	91	38
Chickenpox	242	237	380	330	2283	2086
Diphtheria	41	36	20	33	237	273
Diphtheria Carriers	7	7	6	20	41	49
Dysentery—Amoebic	—	—	—	—	—	7
Dysentery—Bacillary	3	49	1	—	115	19
Erysipelas	9	1	7	9	71	75
Encephalitis	—	—	1	1	11	13
Influenza	10	7	162	81	189	652
Measles	115	95	30	50	5427	2793
Measles—German	2	3	1	—	245	172
Meningococcal Meningitis	1	—	1	3	21	36
Mumps	38	27	232	171	1535	3734
Ophthalmia Neonatorum	—	—	—	—	—	—
Pneumonia—Lobar	9	9	22	15	162	189
Puerperal Fever	—	—	1	—	4	4
Scarlet Fever	87	78	216	159	2111	1616
Septic Sore Throat	—	—	8	2	23	50
Smallpox	—	—	—	—	—	—
Tetanus	—	—	—	—	2	2
Trachoma	—	—	—	—	—	3
Tuberculosis	81	26	62	25	607	600
Typhoid Fever	3	3	1	—	21	23
Typhoid Paratyphoid	—	—	—	—	—	3
Typhoid Carriers	—	—	—	—	1	2
Undulant Fever	—	—	1	1	8	12
Whooping Cough	28	28	52	80	420	1847
Gonorrhoea	108	161	112	137	1737	1675
Syphilis	43	56	45	67	663	580
Actinomycosis	—	—	—	1	2	2
Meningitis Carriers	—	—	—	—	—	6

Deaths from Communicable Diseases

November, 1944

Urban—Cancer 59, Pneumonia (other forms) 8, Tuberculosis 5, Pneumonia Lobar 4, Influenza 2, Syphilis 2, Pyemia 1, Dysentery 1, Skin disease 1. Other deaths under 1 year 14. Other deaths over 1 year 228. Stillbirths 11. Total 336.

Rural—Cancer 28, Tuberculosis 11, Pneumonia (other forms) 9, Pneumonia Lobar 5, Diphtheria 2, Influenza 2, Whooping Cough 2, Lethargic encephalitis 1, Measles 1, Syphilis 1, Cerebrospinal meningitis 1. Other deaths under 1 year 23. Other deaths over 1 year 149. Stillbirths 12. Total 247.

Indians — Tuberculosis 3, Pneumonia (other forms) 2, Measles 1, Whooping Cough 1. Other deaths under 1 year 3. Other deaths over 1 year 1. Stillbirths 0. Total 11.

Diphtheria—With 40 cases in this four-week period and 36 in the last period, is much too prevalent. It has broken out in many parts of the Province. Spread is probably due to carriers travelling to these areas. In 1945 we can cut the morbidity and mortality if more toxoiding and re-toxoiding is done.

Dysentery of the Bacillary type was prevalent in several institutions. It is probably more common than we suspect. In suspect cases stools should be submitted for laboratory test.

Smallpox—Three cases reported in North Dakota. It will always be a hazard until one hundred percent of the population are vaccinated and re-vaccinated.

Immunization—Why not keep records of those immunized in your office during 1945? Blank forms for recording will be supplied on request by the Department of Health and Public Welfare.

DISEASE	*738,000 Manitoba	*3,825,000 Ontario	*908,000 Saskatchewan	*2,972,300 Minnesota	*641,935 North Dakota
Actinomycosis	—	—	—	—	—
Anterior Poliomyelitis	—	1	3	3	5
Chickenpox	242	1,871	214	—	134
Diphtheria	41	22	18	40	69
Diphtheria Carriers	7	—	1	—	—
Dysentery—Amoebic	—	5	—	9	—
Dysentery—Bacillary	3	—	—	3	—
Encephalitis—Epidemica	—	—	—	—	1
Erysipelas	9	6	1	—	1
German Measles	2	48	19	—	—
Influenza	10	185	—	4	113
Malaria	—	—	1	—	—
Measles	115	391	309	84	6
Mumps	38	389	33	—	—
Ophthalmia Neonatorum	—	—	—	—	—
Puerperal Fever	—	—	—	—	—
Scarlet Fever	87	540	35	247	61
Septic Sore Throat	—	—	3	—	—
Smallpox	—	—	—	—	3
Trachoma	—	—	2	—	9
Tuberculosis	81	173	33	6	16
Tularaemia	—	—	—	—	—
Typhoid Fever	3	1	—	—	—
Typhoid Fever Carriers	—	—	—	—	—
Typhoid-Para-Typhoid	—	—	—	1	—
Undulant Fever	—	1	3	15	1
Whooping Cough	28	278	9	73	23
Gonorrhoea	108	479	—	—	19
Syphilis	43	285	—	—	8

*Approximate Populations.



Allenburys

BYNIN AMARA

AN OUTSTANDING GENERAL TONIC

Invaluable post-operatively for post-maternity,
and after influenza as a general tonic.

THE ALLEN & HANBURYS CO. LTD.

LINDSAY, ONTARIO . . LONDON, ENGLAND

The Diagnosis of Gonorrhoea in the Female

By Douglas E. Cannell, M.D.

Consultant in Gynaecology, Division of Venereal Disease Control,
Ontario Provincial Department of Health

The accurate diagnosis of gonorrhoea in the female is of paramount importance in any effort to eliminate or control the disease in a community. The female patient, who is examined but whose infection is not detected, may be responsible for the further spread of gonorrhoea to many more persons.

It is recognized that the diagnosis of gonorrhoea presents greater difficulties in the female than in the male patient. A diagnosis in the male based upon history and clinical evidence of disease, is usually corroborated bacteriologically. In the female, however, the diagnosis upon clinical grounds is unlikely to be satisfactory in a considerable proportion of cases. Bacteriological proof of infection, or more than one trustworthy epidemiological report as a contact, is essential to make a diagnosis. In this province facilities for bacteriological diagnosis are available in the Provincial Laboratories. It is known that cultures are superior to smears for diagnosis. However, due to difficulties in the preservation of media and in the transport of cultures to laboratory centres, in all sections of the province where cultures cannot be incubated within two to three hours of planting, physicians must rely upon the examination of smears alone.

In the use of smears, as of cultures, the value of several serial examinations has been proven definitely. If a single examination is relied upon, from 30 to 50 percent of infections will be missed. It has been demonstrated that the most satisfactory method of establishing the greatest number of positive diagnoses is that which requires six successive weekly examinations. Less than this number of examinations will fail to detect a considerable number of carriers, more will not produce a justifiable increase in the incidence of positive diagnoses commensurate with the effort entailed.

In order that the public and the profession obtain the best results in the direction of improved diagnosis from these examinations, procedure is suggested in the remainder of this article to serve as a guide to physicians confronted with the problem of a female patient under investigation for possible gonorrhoeal infection.

Technique of Examination for Gonorrhoea in the Female

1. The patient is placed in the lithotomy position for examination.
2. The introitus is swabbed carefully with a dry cotton ball.
3. Using the unlubricated index finger, the urethra is then firmly stripped against the pubis from within outwards twice or three times.
4. A small cotton-tipped applicator is next inserted carefully into the urethra, gently rotated, then removed.
5. The applicator is then rolled upon a clean, dry glass slide for its full length. Care is thus taken to make a thin, evenly distributed smear.
6. Smears are next obtained from Bartholin's gland. Each gland is squeezed between the thumb and forefinger to express secretion from the duct. The technique of making films of this secretion is the same as above.
7. Next an unlubricated speculum is inserted into the vagina, the cervix is exposed and cleaned with a dry cotton pledget.
8. The mucous plug is removed from the cervix by gently compressing the cervix between the lips of the speculum or with a sponge forceps.
9. A cotton-tipped applicator is now inserted into the cervical canal, rotated gently and removed. The smear is made in a similar fashion to that described for the urethra.
10. The smears are allowed to dry and are then fixed by flame and stained by Gram's stain.
11. Where smears are sent to Provincial Laboratories, drying alone, without fixing by flame, is required. In submitting smears to laboratory care should be taken that each is marked to indicate the tissue from which it was made. Further slides should be protected against breakage in transit by careful packaging.
12. A positive diagnosis is obtained upon detecting Gram-negative, intracellular diplococci.
13. If the first examination fails to produce a positive diagnosis, the patient should be

re-examined at weekly intervals for five further successive weeks before being dismissed as free of disease.

14. In any centre where cultures are available, they should be utilized in addition to smears.

15. In the course of these examinations, at least one and usually two, intra or post-menstrual examinations will be done which materially enhances the prospect of positive diagnosis.

16. EVERY PATIENT EXAMINED FOR GONORRHOEAL INFECTION SHOULD HAVE A BLOOD TEST FOR SYPHILIS. Both diseases may be present.

Important Points in the Diagnosis of Female Gonorrhoea

1. The urethra, Skene's glands, Bartholin's glands and the cervix are the common sites of gonococcal infection. All should be carefully examined.

2. The cervix is the most common focus of persistent infection in chronic gonorrhoea.

3. The use of the unlubricated glove and speculum is essential to obtain satisfactory smears and cultures.

4. The importance of six serial examinations at weekly intervals is stressed in order that the maximum number of correct diagnoses may be obtained.

5. Both syphilis and gonorrhoea may be present. Include a blood test for syphilis in the examination.

6. If gonorrhoea is diagnosed, report the case to the Provincial Department. Enquire for the names of other contacts of the patient.

Health Fair

Prevention was the theme of a Health Fair held in Selkirk on January 19th and 20th. The Home and School Association sponsored this unique fair in order that the parents and teachers could learn scientific facts about the health and well-being of their children and the community as a whole.

In cooperation with the Bureau of Health and Welfare Education of the Department

of Health and Public Welfare, several exhibits were planned and prepared. Eight exhibits attractively mounted on beaver-board supplied by the community, were arranged around the Recreation Hall. The subjects selected for the exhibits were those that lent themselves to prevention or control. Their titles included:

Mental Hygiene — The Four Pillars of Child Development.

Sanitation — How Safe is Your Community Sanitation?

Communicable Diseases — For the Manitoba Baby—Protection Against Smallpox, Diphtheria, Whooping Cough.

Venereal Disease — Safeguard Your Family Against Venereal Disease.

Nutrition—Eat Right to Feel Right.

Maternal and Infant Hygiene—For the Manitoba Baby—Prenatal, Intranatal and Post Natal Care.

Cancer—With Cancer Time Counts.

Tuberculosis — Rehabilitation and Selkirk Tuberculosis Survey.

The Manitoba Hospital Service Association had an exhibit and the Blood Donor Clinic signed up volunteers.

Each exhibit was in charge of a consultant and pamphlet material was distributed to interested visitors.

Health films were shown to adults in the front Hall which had been darkened by blankets loaned by the community. The subjects were "Choose to Live," an excellent teaching film on cancer control, "Fight Syphilis" which depicted the community's responsibility for V. D. control, "Good-bye Mr. Germ"—which tells the story of how to conquer tuberculosis. The entire school population of 800 children visited the Fair on Friday to view the exhibits, collect materials for school projects and to view films on nutrition, care of the teeth and tuberculosis.

This is the first project of this kind carried on in Manitoba. Its success was due to the fact that it was a community enterprise and much credit is due to the leaders in Selkirk for grasping the significance of modern scientific medicine.

STAPHYLOCOCCUS TOXOID

FOR TREATMENT OF LOCALIZED STAPHYLOCOCCAL INFECTIONS

Staphylococcus Toxoid is a specific antigen for use in the prevention or treatment of certain types of localized staphylococcal infections, such as boils, styes, pustular acne and recurrent migratory staphylococcal abscesses of soft tissues and bone. Staphylococcus toxoid may be administered in 8 subcutaneous doses at intervals of from five to seven days.

NEW PACKAGE

Staphylococcus Toxoid is now supplied by the Connaught Laboratories in packages containing a 2-cc. vial of diluted toxoid (Strength A) and a 2-cc. vial of undiluted toxoid (Strength B). Strength A is a 1-in-4 dilution of Strength B and is intended for use in the four initial doses. Together, the two vials contain sufficient material for the series of 8 injections.

CONVENIENCE IN ADMINISTRATION

The new package replaces a package in which was provided a 2-cc. vial of undiluted toxoid and a vial of sterile diluent for preparing various dilutions. Since the material in the new package is ready for use without further dilution, it will be found more convenient by the physician. Laboratory studies have demonstrated that the diluted toxoid in this package remains stable and potent.

CONNAUGHT LABORATORIES

University of Toronto

Toronto 5, Canada

Depot for Manitoba

BRATHWAITES LIMITED

431 Portage Avenue, Winnipeg

CORTUNON

A Cardiac Hormone, Stimulant, Non Toxic,
Non Pyrogenic, Non Cumulative.

FELSOL

The British remedy for
Asthma and Bronchitis.

HYPOTENSYL

Medication of Choice for Treatment
of Duration Against Hypertension.

PANTAVENE

Total Extract of Oats the Natural Tonic
for "ASTHENIAS."

STANNOXYL

"THE ORIGINAL" Tin and Tin-oxide
Preparation.

SULFOSALYL

The Balanced, Synergistic Combination for
Relief of Rheumatics and Arthritis.

Vi-Mi-Caps

The Most Complete Formula Combining
Scientifically the Recognized VITAMINS
PLUS THE ESSENTIAL MINERALS.

THE ANGLO-FRENCH DRUG COMPANY, 209 ST. CATHERINE STREET EAST
MONTREAL

QUEBEC



DEAF SMITH COMES TO CANADA

Since the initial disclosure in 1916 it has been evident that tooth decay is, and has been practically non-existent in Deaf Smith county, Texas. Tests prove the soil of that county to be extremely high in Calcium and Phosphorus—Deaf Smith wheat is up to 600% higher in Phosphorus than grain grown elsewhere.

"Solid teeth at 70" is as common in Deaf Smith as is "NO teeth at 70" in Canada.

OSTEOCAPS and OSTEOTABS too are extremely high in Calcium, Phosphorus AND Fluorine . . . in ideal ratio. The Canadian diet supplemented with these bone meal products should produce, in Canada, the enviable dental condition of Deaf Smith county.

OSTEOCAPS and OSTEOTABS contain 0.5 grams select bone flour with added Vitamins A and D. They are exclusively prescription items. Dose: one or two with every meal.

Please write for literature and trial packages.



Anglo-CANADIAN
DRUG  **Company**

LIMITED

OSHAWA CANADA

MANUFACTURERS OF FINE PHARMACEUTICALS

Western Depot—236 Edmonton St., Winnipeg

